

Attorney Docket No. 07319-097002
Serial No.: 10/616,481
Amendment dated July 21, 2004
Reply to Office Action dated March 25, 2004

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (cancelled)

2. (previously presented) A method, comprising:

using a computer to process a digital file indicative of a color gobo shape to be projected by a system;

producing outputs which are adapted to simultaneously control three digital light shape altering devices to states indicative of said color gobo shape for each of three primary colors.

3. (previously presented) A method as in claim 2, further comprising using said outputs to control three light shape altering devices.

4. (previously presented) A method as in claim 3, further comprising using said light shape altering devices to alter a shape of light which is passed.

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5. (previously presented) A method as in claim 4, further comprising combining light which has been shaped by said three light shape altering devices into a composite light shape.

6. (previously presented) A method as in claim 5, further comprising providing a first primary color of light to a first light shape altering device, a second primary color of light to a second light shape altering device, and a third primary color of light to a third light shape altering device.

7. (previously presented) A method as in claim 6, wherein said providing comprises filtering white light to provide said primary colors of light.

8. (previously presented) A method as in claim 2, wherein said producing simultaneously produces output signals respectively indicative of red, green and blue components of the color gobo shape.

9. (previously presented) A method as in claim 2, wherein said producing simultaneously produces output signals respectively indicative of cyan, magenta and yellow components of the color gobo shape.

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10. (previously presented) A method as in claim 2, wherein said digital light shape altering devices are digital mirror devices, and said outputs comprises three separate outputs which respectively drive three separate digital mirror devices.

11. (currently amended) ~~A method as in claim 6,~~ A method,
comprising:

using a computer to process a digital file indicative of a
color gobo shape to be projected by a system;

producing outputs which are adapted to simultaneously
control three digital light shape altering devices to states
indicative of said color gobo shape for each of three primary
colors;

using said outputs to control three light shape altering
devices;

using said light shape altering devices to alter a shape of
light which is passed;

combining light which has been shaped by said three light
shape altering devices into a composite light shape;

providing a first primary color of light to a first light
shape altering device, a second primary color of light to a

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second light shape altering device, and a third primary color of
light to a third light shape altering device; and

wherein said providing comprises providing said light over
fiber optic cables.

12. (previously presented) A method comprising:
obtaining a signal to be used to shape a beam of light;
separating said signal into at least first and second
different signals, each of which control a different aspect of
shaping said beam of light; and
providing said first and second signals simultaneously for
use in shaping said light.

13. (previously presented) A method as in claim 12, further
comprising using said first and second signals to simultaneously
drive gobo shaping parts which simultaneously produce first and
second shaped light parts.

14. (previously presented) A method as in claim 12, further
comprising illuminating said gobo shaping parts with light, and
combining outputs of said gobo shaping parts.

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15. (previously presented) A method as in claim 12, wherein said aspect of light is light colors, and said first and second different signals simultaneously control different light colors.

16. (previously presented) A method as in claim 12, wherein said first and second signals control said gobo shaping parts, pixel by pixel.

17. (previously presented) A method as in claim 13, further comprising controlling said gobo shaping parts, pixel by pixel, using said first and second signals respectively.

18. (currently amended) ~~A method as in claim 14,~~ A method comprising:

obtaining a signal to be used to shape a beam of light;
separating said signal into at least first and second
different signals, each of which control a different aspect of
shaping said beam of light;

providing said first and second signals simultaneously for
use in shaping said light;

illuminating said gobo shaping parts with light, and
combining outputs of said gobo shaping parts; and

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wherein said illuminating comprises using a fiber optic element to illuminate said gobo shaping parts.

19. (previously presented) A method as in claim 12, wherein said separating comprises separating said signal into first, second and third different signals, each of which simultaneously control shaping a different color components of light.

20. (previously presented) A method as in claim 19, wherein said different color components are red, green and blue.

21. (previously presented) A method as in claim 19, wherein said different color components are cyan, magenta and yellow.

22. (previously presented) A method, comprising:

first controlling a first light shape altering device to produce shaped light according to a first color portion of a final desired light output; and

simultaneously with said first controlling, second controlling a second light shape altering device to produce shaped light according to a second color portion of a final desired light output.

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23. (previously presented) A method as in claim 22, further comprising, simultaneously with said first and second controlling, third controlling a third light shape altering device to produce shaped light according to a third color portion of the final desired light output, where the first, second and third color portions correspond to primary colors.

24. (previously presented) A method as in claim 23, further comprising illuminating said first second and third light shape altering devices with respective primary colors of light, and combining outputs of said first second and third light shape altering devices into a single composite shaped light.

25. (previously presented) A method as in claim 22, wherein said first controlling comprises producing an output signal adapted for controlling a digital mirror device.

26. (previously presented) A method as in claim 24, wherein said illuminating comprises illuminating with a light source greater than 100W.

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27. (previously presented) A method as in claim 24, wherein said illuminating comprises putting light onto a light waveguide at one end.

28. (currently amended) ~~A method as in claim 27,~~ A method, comprising:

first controlling a first light shape altering device to produce shaped light according to a first color portion of a final desired light output;

simultaneously with said first controlling, second controlling a second light shape altering device to produce shaped light according to a second color portion of a final desired light output;

simultaneously with said first and second controlling, third controlling a third light shape altering device to produce shaped light according to a third color portion of the final desired light output, where the first, second and third color portions correspond to primary colors;

illuminating said first second and third light shape altering devices with respective primary colors of light, and combining outputs of said first second and third light shape altering devices into a single composite shaped light;

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wherein said illuminating comprises putting light onto a
light waveguide at one end; and

further comprising endings and fiber optic cable.

29. (previously presented) A method, comprising:

using a computer to form first, second and third color
components, each of which represents a primary color component
of a desired shape and color for light; and

producing controlling signals to drive three digitally
controllable light shape altering devices with the first, second
and third color components, simultaneously.

30. (previously presented) A method as in claim 29, wherein
said digitally controllable light shape altering devices are
digital mirror devices.

31. (previously presented) A method as in claim 29, wherein
said using a computer comprises defining a gobo shape in the
computer, forming an image indicative of the gobo shape, and
separating the image into its primary color components.

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32. (previously presented) A method as in claim 31, wherein said primary color components comprise red, green and blue color components.

33. (previously presented) A method comprising:
forming at least first and second different signals coming each of which control a different aspect of shaping a beam of light;

providing said first and second signals simultaneously to at least first and second digital light shape altering devices; and

providing first and second beams of light, having different characteristics than one another, respectively to said first and second light shape altering devices.

34. (previously presented) A method as in claim 33, wherein said first and second beams of light have different colors than one another.

35. (previously presented) A method as in claim 33, wherein said first and second beams of light have different intensities than one another.

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36. (previously presented) A method as in claim 33, wherein said digital light shape altering devices are digital mirror devices.

37. (previously presented) A method as in claim 33, wherein said first and second beams of light are high-intensity beams of at least 100W.

38. (previously presented) A lighting system, comprising:
a controller, obtaining a signal to be used to shape a beam of light and separating said signal into at least first and second different signals, each controlling a different aspect of shaping said beam of light and forming outputs which are adapted to simultaneously control: a) a first digital gobo shaping part, that shapes a light beam according to said first signal to produce a first shaped light beam part, and b) a second digital gobo shaping part totally separate from said first digital gobo shaping part which receives said second signal.

39. (previously presented) A system as in claim 38, further comprising the first and second digital gobo shaping parts, shaping light beams according to said outputs.

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40. (previously presented) A system as in claim 38, further comprising first and second digital gobo parts, which include a device which is pixel level controllable, each of which changes a reflective state of each of a plurality of pixels separately.

41. (previously presented) A system as in claim 40, wherein said pixel level controllable device are digital mirror devices.

42. (currently amended) ~~A system as in claim 40,~~ A lighting system, comprising:

a controller, obtaining a signal to be used to shape a beam of light and separating said signal into at least first and second different signals, each controlling a different aspect of shaping said beam of light and forming outputs which are adapted to simultaneously control: a) a first digital gobo shaping part, that shapes a light beam according to said first signal to produce a first shaped light beam part, and b) a second digital gobo shaping part totally separate from said first digital gobo shaping part which receives said second signal;

first and second digital gobo parts, which include a device which is pixel level controllable, each of which changes a reflective state of each of a plurality of pixels separately;
and

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wherein said pixel level controllable devices are grating light valves.

43. (currently amended) ~~A system as in claim 38,~~ A lighting system, comprising:

a controller, obtaining a signal to be used to shape a beam of light and separating said signal into at least first and second different signals, each controlling a different aspect of shaping said beam of light and forming outputs which are adapted to simultaneously control: a) a first digital gobo shaping part, that shapes a light beam according to said first signal to produce a first shaped light beam part, and b) a second digital gobo shaping part totally separate from said first digital gobo shaping part which receives said second signal; and

wherein said optical output part includes a fiber-optic element, receiving input light at one end thereof, and coupling said input light to a second end.

44. (previously presented) A system as in claim 38, further comprising a third output adapted to control a third digital gobo part according to a third aspect of shaping said beam of light.

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45. (previously presented) A system as in claim 38, wherein said different aspects of light are different colors of light.

46. (previously presented) A system as in claim 44, wherein said different aspects of light are different colors of light, and each of said first, second and third digital gobo parts respectively controls a part of a light shaping output optimized for a different primary color of light.

47. (currently amended) ~~A system as in claim 38,~~ A lighting system, comprising:

a controller, obtaining a signal to be used to shape a beam of light and separating said signal into at least first and second different signals, each controlling a different aspect of shaping said beam of light and forming outputs which are adapted to simultaneously control: a) a first digital gobo shaping part, that shapes a light beam according to said first signal to produce a first shaped light beam part, and b) a second digital gobo shaping part totally separate from said first digital gobo shaping part which receives said second signal; and

wherein said optical output part includes three fiber-optic cables, each having a first end receiving a shaped light primary

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components, and a second end of each of said fiber-optic cables being located near one another to produce a composite output.

48. (currently amended) ~~A system as in claim 38,~~ A lighting system, comprising:

a controller, obtaining a signal to be used to shape a beam of light and separating said signal into at least first and second different signals, each controlling a different aspect of shaping said beam of light and forming outputs which are adapted to simultaneously control: a) a first digital gobo shaping part, that shapes a light beam according to said first signal to produce a first shaped light beam part, and b) a second digital gobo shaping part totally separate from said first digital gobo shaping part which receives said second signal; and

wherein said optical output part comprises a plurality of fiber-optic cables, receiving a shaped light at an input end thereof, and positioned to produce an output light produced by said first and second digital gobo parts in a way that produces composite light output.

49. (previously presented) A system as in claim 47, wherein said fiber optic cables are bent.